

## THE INVENTOR CLAIMS:

1. An intraocular lens assembly for increased depth of focus, comprising:

a frame having haptics extending oppositely to engage peripheral portions of a capsular bag, said frame being configured to vault posteriorly in an eye of a person,

said frame having end portions to engage in the periphery of the capsular bag of an eye,

said frame defining a generally circular opening between inner portions of said haptics,

an optic sized and configured to engage in an edge portion of said frame opening, and

interengaging features on the frame and on the optic for attachment of the optic to the frame for limited optic movement relative to the frame,

whereby light refracted by the cornea of the eye travels an increased distance to the optic to substantially increase depth of focus.

2. An assembly according to Claim 1, wherein:

2        said optic has a thickness substantially less than the  
thickness of a natural human optic.

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2        3. An assembly according to Claim 3, wherein the optic is  
about 1.0 mm in thickness.

4. An assembly according to Claim 3, wherein the optic has  
a thickness between 0.5 mm and 1.5 mm.

5. An assembly according to Claim 1, wherein:

2        said interengaging features comprise transverse slots in  
the frame spaced oppositely from said opening, and mounting  
4        portions extending oppositely from the optic and having transverse  
ridges at end portions thereof for retention in the slots.

6. An assembly according to Claim 5, wherein at least one  
of said slots has a widened portion with slot end shoulders to  
retain at least one of said ridges for prevention of optic lateral  
movement.

7. An assembly according to Claim 6, wherein each of said  
slots has a widened portion with end shoulders to retain the optic  
against lateral movement.

8. An assembly according to Claim 1, and further  
including:

an edge portion of the frame about said frame opening  
extending posteriorly to engage the optic farther posteriorly.

9. An assembly according to Claim 6, and further  
including:

a notch extending from at least one of said slots adjacent  
to said frame opening to facilitate folding of the frame for  
insertion thereof through a slit in an eye.

10. An assembly according to Claim 6, and further including  
a notch extending from each of said slots toward said frame opening  
for facilitating the folding of the frame for insertion thereof  
through a slit in an eye.

11. An assembly according to Claim 6, wherein:

a portion of the haptic between each slot and said frame  
opening has a reduced longitudinal dimension to facilitate folding  
of the frame longitudinally for insertion of the frame through a  
slit in an eye.

12. An intraocular lens assembly for increased depth of focus, comprising:

a frame of generally rigid material and configured to vault posteriorly in an eye of a person, said frame having haptics extending oppositely therefrom to engage peripheral portions of a capsular bag,

said frame defining a central generally circular opening,

said frame having transverse slots spaced oppositely from said frame opening, and

an optic adapted to be disposed adjacent said frame opening, said optic having mounting portions extending oppositely therefrom for engagement in said frame slots to retain the optic relative to the frame,

whereby light refracted by the cornea of the eye travels an increased distance to the optic to substantially increase depth of focus.

13. An assembly according to Claim 12, wherein:

said optic has a thickness substantially less than the thickness of a natural human optic.

14. An assembly according to Claim 13, wherein the optic is about 1.0 mm in thickness.

15. An assembly according to Claim 13, wherein the optic has a thickness between 1.5 mm and 1.5 mm.

16. An assembly according to Claim 12, wherein:

said optic mounting portions extending oppositely from the optic have transverse ridges at end portions thereof for retention in the slots.

2 17. An assembly according to Claim 16, wherein at least one of said slots has a widened portion with slot end shoulders to retain at least one of said ridges to retain the optic in position.

2 18. An assembly according to Claim 16, wherein each of said slots has a widened portion with end shoulders to retain the optic against lateral movement.

19. An assembly according to Claim 12, and further including:

an edge portion of the frame adjacent to said frame opening extending posteriorly to engage the optic farther posteriorly.

2 20. An assembly according to Claim 16, and further including:

4 a notch extending from at least one of said slots toward said frame opening to facilitate folding of the frame for insertion thereof through a slit in an eye.

21. An assembly according to Claim 16, and further  
including:

a notch extending from each of said slots toward said frame  
opening for facilitating the folding of the frame for insertion  
thereof through a slit in an eye.

22. An assembly according to Claim 16, wherein:

a portion of the haptic between each of said slots and said  
frame opening has a reduced longitudinal dimension to facilitate  
folding of the frame longitudinally for insertion of the frame  
through a slit in an eye.

23. An assembly according to Claim 12, wherein:

a loop portion extends from the outer end portion of each  
haptic and transversely of the lens to engage the peripheral  
portions of the capsular bag.



24. Apparatus according to Claim 12, wherein an enlarged opening is defined in each of said haptics, and extends into proximity with said slots to define a substantially narrow hinge portion to substantially narrow haptic portions to facilitate bending of the lens along its longitudinal axis.

25. An assembly according to Claim 12, wherein said mounting portions of the optic comprise ridges, and at least one of said ridges has a passage therethrough to facilitate insertion and engagement of the optic mounting portion in the slot.

26. An apparatus according to Claim 25, wherein each of the oppositely extending mounting portions has a passage therethrough.

27. An intraocular lens assembly for increased depth of  
focus, comprising:

a pair of relatively rigid spaced-apart frame members  
adapted for engagement with the periphery of a capsular bag of the  
eye, and

a web secured to and extending between said frame members  
and having thereon an optic,

said web being secured to the frame members by (a) integral  
molding with the frame members, (b) spot-welding, (c) fastener  
elements.

28. An intraocular lens assembly according to Claim 27,  
wherein said frame members have end loop portions extending  
oppositely and transversely to engage in the peripheral portion of  
the capsular bag.

29. An intraocular lens assembly according to Claim 28,  
wherein said loop portions are extensions of the frame members.

30. An intraocular lens assembly according to Claim 27,  
wherein:

the web has portions extending oppositely from the optics,

and

said web portions being bifurcated and having lugs thereon,

said frame members having slits defined therein to receive  
the lugs of the web portions, and the lugs and loops being  
generally disposed equidistant from a center of the optic.